

SIEMENS

Siremobil Iso-C / Powermobil

SP

Replacement Instructions

Replacement of the swivel brake

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English

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Validity of these instructions

These instructions are valid for the replacement of the swivel brake on the SIREMOBIL Iso-C and POWERMOBIL products.

Required documents

- For SIREMOBIL Iso-C: SIREMOBIL Iso-C System manual and Service instructions.
- For POWERMOBIL: POWERMOBIL System manual and Service instructions

Required tools, measurement and auxiliary devices

NOTE

All tools, measurement and auxiliary devices with the exception of those marked "", are listed along with their specifications in the STC (Service Tools Catalogue).

- Protective conductor meter (e.g. or Safety meter, part no. 44 15 899 RV090)
(e.g. Bender safety meter, part no. 97 06 979 Y0526)
- Tool kit*
- 1 set Allen keys*
- 200 N spring scale (e.g. part no. 44 15 113 RH090)
- Torque wrench 20 Nm to 100 Nm (e.g. part no. 80 86 159 RE999)

Safety Information

⚠WARNING

Risk of physical injury or death and property damage!

Observe

- the product-specific safety information in these instructions and the service instructions of the product,
- the general safety information in the instructions TD00-000.860.01... and
- the general safety information according to ARTD Part 2.

Noncompliance can lead to death, physical injury or property damage.

⚠WARNING

Electrical voltage!

Noncompliance can lead to death, physical injury or property damage.

After completing all service work and attaching all system covers, you must perform a protective ground wire test according to ARTD-002.731.17... .

The protective ground wire resistance must not exceed 0.2 ohms.

⚠CAUTION

Risk of being burned by hot parts or components!

Noncompliance can lead to light or medium burns, especially of the hands.

Once the covers have been removed, parts or components (e.g. power components, heat sinks, solenoid brakes) become accessible which may exhibit temperatures of up to 50°C in operation. To prevent burns, switch off the system power supply before contacting any parts or components and let the system cool off for at least 5 minutes before resuming work.

⚠CAUTION

Electrical voltage!

Noncompliance can lead to property damage.

ESD protection guidelines must be observed when servicing.

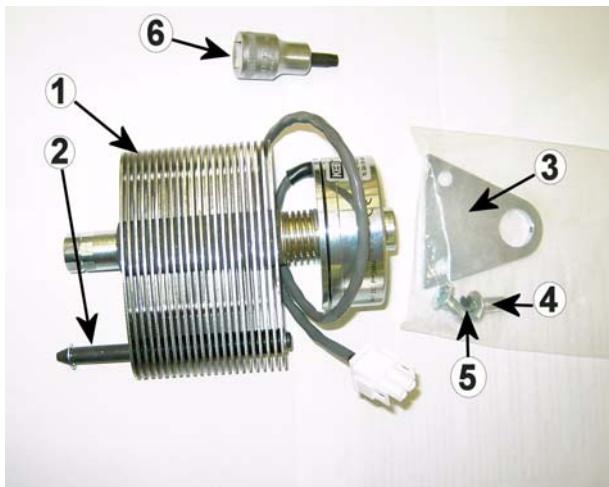


Fig. 1

Contents of swivel brake replacement kit 56 44 955

NOTE

**The new swivel brake is delivered assembled and preset.
Do not dismantle the new swivel brake!**

1 / Fig. 1 = swivel brake

2 / Fig. 1 = bolt

3 / Fig. 1 = mounting bracket above

4 / Fig. 1 = countersunk head screws for upper mounting bracket

5 / Fig. 1 = grub screw for mounting upper bracket

6 / Fig. 1 = TORX screwdriver insert

Not illustrated: Replacement instructions

Opening the basic unit

- Disconnect the system from the mains, pull out the power plug.
- Remove the cover of the basic unit.
- Loosen the protective ground wire.

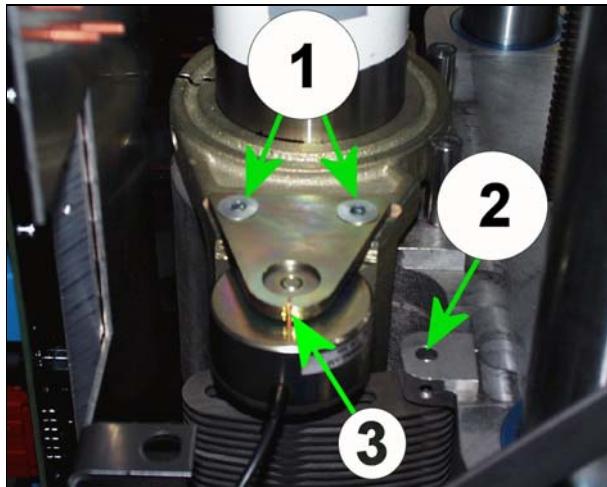


Fig. 2

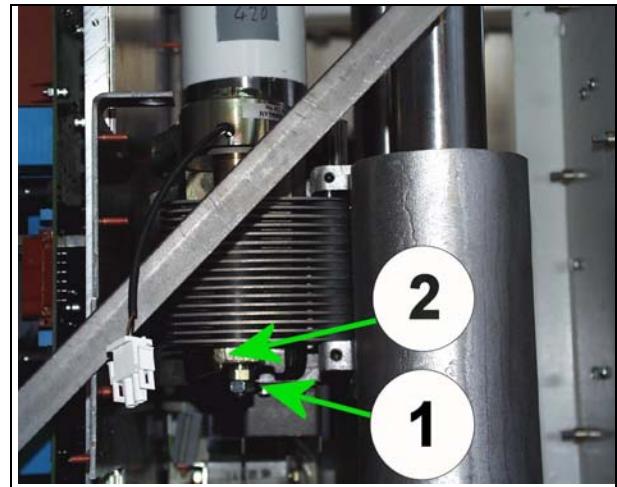


Fig. 3

Removing the swivel brake

NOTE

After the swivel brake is released, the swivel movement of the C-arm is free. To avoid unwanted swivel movements, the C-arm swivel movement should be blocked, for example with two chairs.

CAUTION

Risk of being burned by hot parts or components!

Noncompliance can lead to light or medium burns, especially of the hands.

The brake magnet of the swivel brake can be hotter than 50° Celsius if the swivel brake is released for a long time! Let the brake magnet cool down before touching it!

- Connect the system briefly to the mains and switch it on.
- Move the vertical lifting column up until the two screws 1/ Fig. 2 and the bolt 2/ Fig. 2 are accessible.
- Switch the system off again and pull out the power plug.
- Loosen the plug connection of the brake magnet of the swivel brake.
- Loosen the cable ties and cable clamps; the cable of the brake magnet is unattached.
- Unscrew the bolt 2/ Fig. 2 completely. This is fastened by means of grub screws or locking ring depending on the production period.

- Loosen the two countersunk head screws 1/ Fig. 2 of the upper mounting bracket.

NOTE

In the older version of the swivel brake (gold colored), the countersunk head screws 1/ Fig. 2 are secured with high-strength LOCTITE against loosening.

If the screws cannot be loosened with an Allen key and the hexagonal holes are deformed, use the Torx screwdriver insert enclosed in the spare parts kit.

To loosen the screws drive the Torx screwdriver insert with a hammer into the hexagonal hole of the screw head and then turn the screw.

- Loosen the grub screw 2 / Fig. 3 in the axle guide of the holder.
- Unscrew the nuts and lock nuts completely 1/ Fig. 3.

⇒ The swivel brake can be lifted upwards out from the axle guide.

If the disks of the swivel brake strike against the holder, swivel the C-arm a little until the disks are free.



Fig. 4

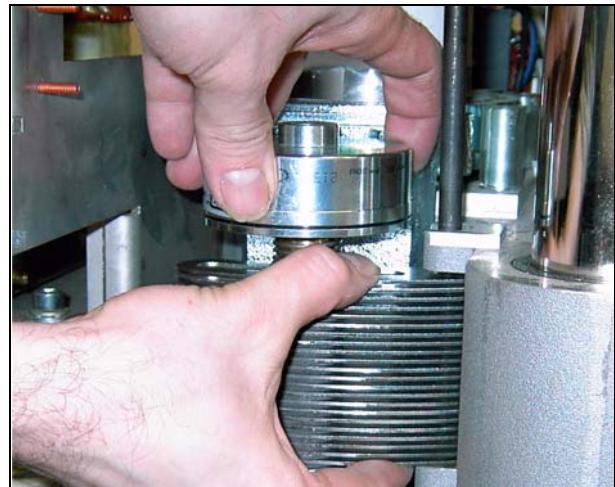


Fig. 5

Installing the new swivel brake

NOTE

The new swivel brake is equipped with a smaller nut and lock nut (position see1/ Fig.3). In this way these do not have to be removed on the swivel brake when installing.

Do no remove the bolt 2/ Fig.2 from the new brake to start with!

- Insert the new brake in the axle guide of the holder (see 1/ Fig. 3).

NOTE

If the new swivel brake cannot be inserted in the axle guide or it can be inserted only with difficulty, then it can be driven into the guide bore with a small rubber hammer.

- Press the brake disks in the direction of the holder.
- Remove the lower locking ring from the bolt 2 / Fig. 1.
- Briefly withdraw the bolt carefully from the new swivel brake. Make sure that the disks and the distance washers between the disks are not shifted in relation to one another. See Fig. 4.
- Swivel the disks in the holder. If necessary swivel the C-arm carefully and slowly with the aid of a second person so that the disks slide into the holder and the bolt can be pushed again through the holder, all disks and distance washers. See Fig. 5.
- Push the bolt in and secure it against slipping out with the locking ring.
- Set the new upper mounting bracket (see 3 / Fig. 1) on the holder and swivel brake and fasten it with the enclosed new countersunk head screws (see 1/ Fig. 2). Secure the countersunk head screws with Loctite 243.
- Secure the two screw heads of the countersunk head screws with Loctite 243 to the mounting bracket.
- Run the cable of the brake magnet again and secure it with cable ties and cable clamps.
- Plug the plug connector of the brake magnet back in.

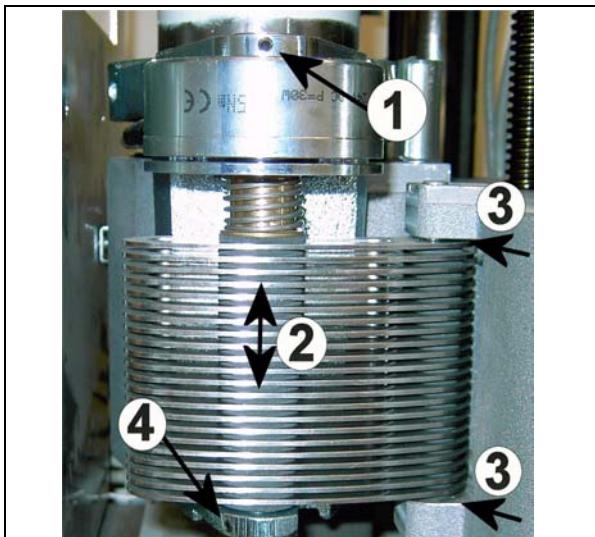


Fig. 6

Adjusting the disk package to the holder

NOTE

For the adjustment the entire swivel brake can still be shifted slightly vertically in the holder (see arrow 2 / Fig. 6).
The C-arm should be in the mid-position before the adjustment is made.

- Screw the grub screw 1 / Fig. 6 into the new upper mounting bracket, but do not tighten it yet.
- Adjust the swivel brake in vertical direction so that the disks lie in the approximate center in the holder. The play between disk and holder at the points 3 / Fig. 6 should be approximately the same.
- Tighten the grub screw 4 / Fig. 6 slightly, so that the swivel brake does not slip down on its own.
- Plug the system into the mains and switch it on.
- Release the swivel brake.
- Move the C-arm slowly around 4-5 times from end stop to end stop.
- Move the C-arm back into its mid-position and apply the brake.
- The disks should lie vertically in the center of the holder.
The play at the positions indicated with arrows 3 / Fig. 6 must be at least 0.5 mm between disk and holder.
- If the play is not correct, change the vertical position of the swivel brake once again and repeat the adjustment as described above.
- Finally, tighten the two grub screws 1 / Fig. 6 and 4 / Fig. 6.

Functional check

CAUTION

Risk of being burned by hot parts or components!
Noncompliance can lead to light or medium burns, especially of the hands.

The brake magnet of the swivel brake can be hotter than 50° Celsius if the swivel brake is released for a long time! Let the brake magnet cool down before touching it!

- Check that the cable of the brake magnet rubs against or is crushed by moving parts in no position of the swivel movement and during the movement of the vertical lift.
- Check the brake forces of the swivel brake in the released and braked condition.
 - ⇒ Brake forces: Refer to the service instructions of the relevant system.

Final work

- Close all covers again.
Pay attention to protective ground wire connections
- Perform the protective ground wire test according to ARTD-002-731.17....
 - ⇒ The protective ground wire resistance must not exceed 0.2 ohms.